DOCUMENT RESUME

ED 128 350 SP 010 426

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TITLE A Model Approach to Teacher Education.
NOTE 14p.

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS Classroom Design; *Demonstration Programs; *Field Experience Programs; *Individualized Instruction; Instructional Design; Models; *Simulated Environment; *Teacher Education; Teacher Educator Education

ABSTRACT

A "model approach" to teacher education specifies the development of a model of an idealized learning environment. One way to create a model as a real entity as opposed to a written document is to operationalize model classrooms that exemplify the type of instruction desired. The model described here goes hand in hand with the university-based and field-coordinated approach: model classrooms are developed on the university campus and in selected schools. This provides teacher education students with learning environments similar in instructional design. The model classrooms at the on-campus and off-campus sites have certain features in common. They are characterized by a physical organization, a personalized management system, and an instructional scheme, which all emphasize individualized instruction. (JMF)

# A MODEL APPROACH TO TEACHER EDUCATION

Submitted to

Association for the Education of Teachers in Science Yearbook



by

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## A "MODEL APPROACH" TO TEACHER EDUCATION

A teacher education program should develop an actual model of the type of learning environment it intends to promote. The model should be concrete, real, alive and operational. It should be such that at any time a teacher, principal, teacher education student, or professor can observe the model in operation as well as participate in it.[1] One way to achieve a learning environment on a university campus which exemplifies that which is desired for most children is to construct a model classroom.

The development of a model classroom is similar to the construction of a model that a scientist might develop to represent some system or phenomenon. The conceptualization and construction of a model evolves gradually, resulting in a product which is sometimes imperfect and requires considerable alteration. However, the important feature of model building, regardless of whether it is related to teacher education or physics or biology, is that there is a physical entity. This helps to analyze, to change, and to communicate what you are about. Constructing a classroom(s) on a university campus which exemplifies all of the human and non-human elements that are being promoted in a teacher education program is instructive. It can be a mirror image of what should exist in the school classrooms as well as a concrete, living document of the teacher education program under way.

The importance of having a concrete entity similar to a model classroom cannot be emphasized enough. A look at the work of James D. Watson[2] in his pursuit of one of the most significant scientific discoveries of our time might help to elucidate this point. Watson who along with Crick,

pieced together evidence gathered from the work of other scientists that DNA was a double helex or a ladder like molecule. As Watson worked on the problem of what the DNA molecule was like, he constructed a wire model of it. Watson reasoned that if Linus Pauling, the famous American Nobel Laureate in Chemistry, could work with children's toys to make models to explain the nature of chemicals, he could solve the DNA riddle by translating the information he was gathering into a wire model of how the molecule might look.

Background

In the 1960's movements were under way to improve teacher education. One such movement was initiated by the U.S. Office of Education, who in 1967 issued a request for proposals specifying comprehensive undergraduate and in-service teacher education programs. Of the 80 proposals received, nine were awarded contracts to develop teacher preparation programs for pre-school through grade eight.[3]

The nine programs funded for development were:

1. A Model for the Preparation of Elementary School Teachers (Florida State University)

2. Behavioral Science Elementary Teacher Education Program (Michigan State University)

3. A Competency-Based, Field-Centered Systems Approach to Elementary Education (Northwest Regional Educational Laboratory)

4. Specifications for a Comprehensive Undergraduate and In-Service Teacher Education Program for Elementary Teachers (Syracuse University)

5. The Teacher-Innovator: A Program to Prepare Teachers (Teacher College, Columbia University)

6. Georgia Educational Model Specifications for the Preparation of Elementary Teachers (University of Georgia)

7. Specifications for a Comprehensive Elementary Teacher Education Program (University of Toledo)

8. Teacher Training for the Individualization of Instruction (University of Pittsburgh)

9. Model Elementary Teacher Education Program (University of Massachusetts)

The detailed specifications of the nine models were related to topics like social change, learning, staff utilization, internship, designing instruction, criterion measures, evaluation, etc. The models surfaced important issues in education like those centering around behavioral objectives, the personalization and individualization of instruction, teacher effectiveness, and the cost of teacher education.

The nine original proposals became known as "The Model Teacher Education Programs." These programs caused many institutions of higher learning to question the adequacy of their teacher training programs. This movement stimulated interest and change in teacher education. It was one of the factors which set the climate for developing "A Model Approach to Teacher Education" discussed in this paper.

Problem

Considerable talk and writing were associated with the teacher education movement in the late 60's and early 70's. As with every movement in education, certain words and phrases become popularized. For example, terms like competency-based, performance-based, field-centered, personalized, and model have been extensively used.[4] Of these the word model has been selected to conceptualize an approach to teacher education.

A model can take on at least two meanings in teacher education. First, it can be described on paper with very little resemblance to what actually occurs in reality. In other words, reading about the model on paper can give you a different image from that which you get when actually observing the training of teachers. Secondly, the model can be physical in nature. For a first-hand experience with this model you need to observe the classrooms associated with it. The term model, as used in the approach to teacher education emphasized in this paper, is related to the latter definition.

In order to achieve the model, selected on-campus and off-campus classrooms are developed simultaneously. These classrooms become the actual physical model. Similar instructional strategies are emphasized in both locations. A great deal of feedback is exchanged between the on-campus and off-campus classrooms, resulting in continual change along similar lines of development.

Alternative Approaches

The Model Approach can be described as a university-based and field-coordinated approach to teacher education. This approach is believed to be different from the university-based and field-oriented approach and the field-based approach. These approaches are summarized below.

The field-based approach places teacher education students in a single training site within the classroom at the outset of the training period. The students spend most of their time in the schools, rarely visiting the university campus. Usually a very general method of teacher

selection is employed. Students are in a variety of classrooms, many of which characterize very different teaching strategies. Often a student will be working with a teacher who models teaching behaviors different from those specified by the university's training program.

The university-based and field-oriented approach allows teacher education students to participate in two learning settings. The first setting is the university or college training facility. In this setting the students usually learn about teaching by reading, lectures, discussion, preparing instructional materials and even giving lessons to their peers. All of this usually takes place in areas or classrooms that are different from those in the schools.

The second setting is the actual classroom(s) located in the schools. Here the teacher education students help teachers and give lessons to small or large groups of children. This situation often presents the students with an environment that is not conducive to explicating what was emphasized in their training on the university campus.

The university-based and field-coordinated approach also provides two settings. The first is a model classroom site on the university campus. Here the teacher education student experiences a learning environment that is similar in many respects to the classrooms that . or she will be working in when in schools. The instructional approach, the manipulative materials, the room arrangement, and even the furniture are similar to that to be experiences in selected school rooms.

The second setting is the field-coordinated component in the schools. Here the teacher education students work only in selected classrooms where those instructional procedures modeled on the university campus can be found.

The teachers in the selected classrooms are members of an in-service team who maintain an ongoing professional relationship with the university's model classroom. This relationship gives input to the training that takes place on campus as well as that which takes place in the schools. Teacher education students can benefit from a training experience where the instructional procedures emphasized are similar, as in the case of the university-based and field-coordinated approach. In this situation the student is able to transfer the skills he or she has learned at the university to the school classroom.[5] This promotes success by reducing dissonance.[6] It also helps to resolve a teacher education student's concerns about self as a teacher.[7]

The Model Classroom

The position advocated in this paper is the "Model Approach" to teacher education. All classrooms associated with the model are emphasizing individualized instruction.[8] The indices of individualization are observed in the physical organization of the classroom, the personalized management system, and the instructional scheme.

The model classrooms are found on the university campus and in community schools. Although classrooms are located in different educational settings, such as public schools, community centers, and institutions, they all have certain observable features in common. The following are the descriptive properties of the model.

The physical organization of the classroom is the most readily observable indicator of the extent to which individualization is occurring.

Furniture size accommodates the learner's needs for comfort. Flexible movement of furniture facilitates peer tutoring and cross-age tutoring, as well as small group activities and large group meetings. Floor coverings of various sizes and colors denote where different activities take place. Learning centers indicate learning modality preferences. There are five learning centers in the model: (1) the teacher center allows the learner to interact with the teacher for concept clarification and/or for basic information; (2) the audio-visual center provides experiences using transparencies, slides, tapes, films, and other auditory-visual forms of instruction; (3) the game center facilitates the learning process by providing the learner with games which are self-directing and self-correcting; (4) the fine motor activities area is the setting for acquiring skills that require small muscle coordination like finger and hand-eye coordination. Activities include those of the paper/pencil variety as well as art and music. (5) The gross motor activities area is an open space which accommodates body action.

The above centers provide the space, furniture and equipment needs. Additionally, the game center and the audio-visual center provide the correlated activities for each objective.

The classroom management indices are scheduling, retrieval, record keeping, and reporting vehicles. Scheduling facilitates human movement within the classroom. As learners move from a teacher controlled pace to a self-directed pace, traffic becomes a prime consideration. The teacher develops a scheduling system that allows learners to move from the

retrieval system to the centers. The retrieval system stores the sequenced objectives. Included in the retrieval system are placement indices, pre/post assessments, and a master correlation inventory. The placement indices allow the teachers to identify a student's entry point into the curriculum. The pre/post assessments facilitate demonstrations of competency and movement to the next objective. The master correlation inventory card indicates the existing optional activities for the development of each concept. Record keeping and reporting are directly related to the objectives. The recording system facilitates the reporting process.

The instructional scheme of the model classroom is represented in Figure 1.

Insert Figure 1 here

Figure 1 represents a system which begins with speciality areas 1-7. The process moves the speciality content through a generic check where common objectives across speciality areas are identified and sequenced (#14). The movement then proceeds to pre/post test points where the learner can demonstrate competency and proceed to the next objectives (15-23).

The centers represent the instructional sites where the objectives may be achieved (17-21). The materials and activities are located in the subject matter area or in the learning centers. Thus the model classroom addresses and operationalizes speciality areas, speciality objectives, generic objectives, sequenced objectives, pre-post tests, and learning centers.

The model classroom components included and described in this section are location, organization, management, and instructional scheme.

Summary

A "Model Approach" to teacher education specifies the development of a model of an idealized learning environment. The model must be a real entity as opposed to a written document. One way to achieve this is to operationalize model classrooms which exemplify the type of instruction desired.

This model goes hand in hand with the university-based and field-coordinated approach. Model classrooms are developed on the university campus and in selected schools. This provides teacher education students with learning environments similar in instructional design.

The model classrooms at the on-campus and off-campus sites have certain features in common. They are characterized by a physical organization, a management system, and an instructional scheme all of which emphasize individualized instruction.

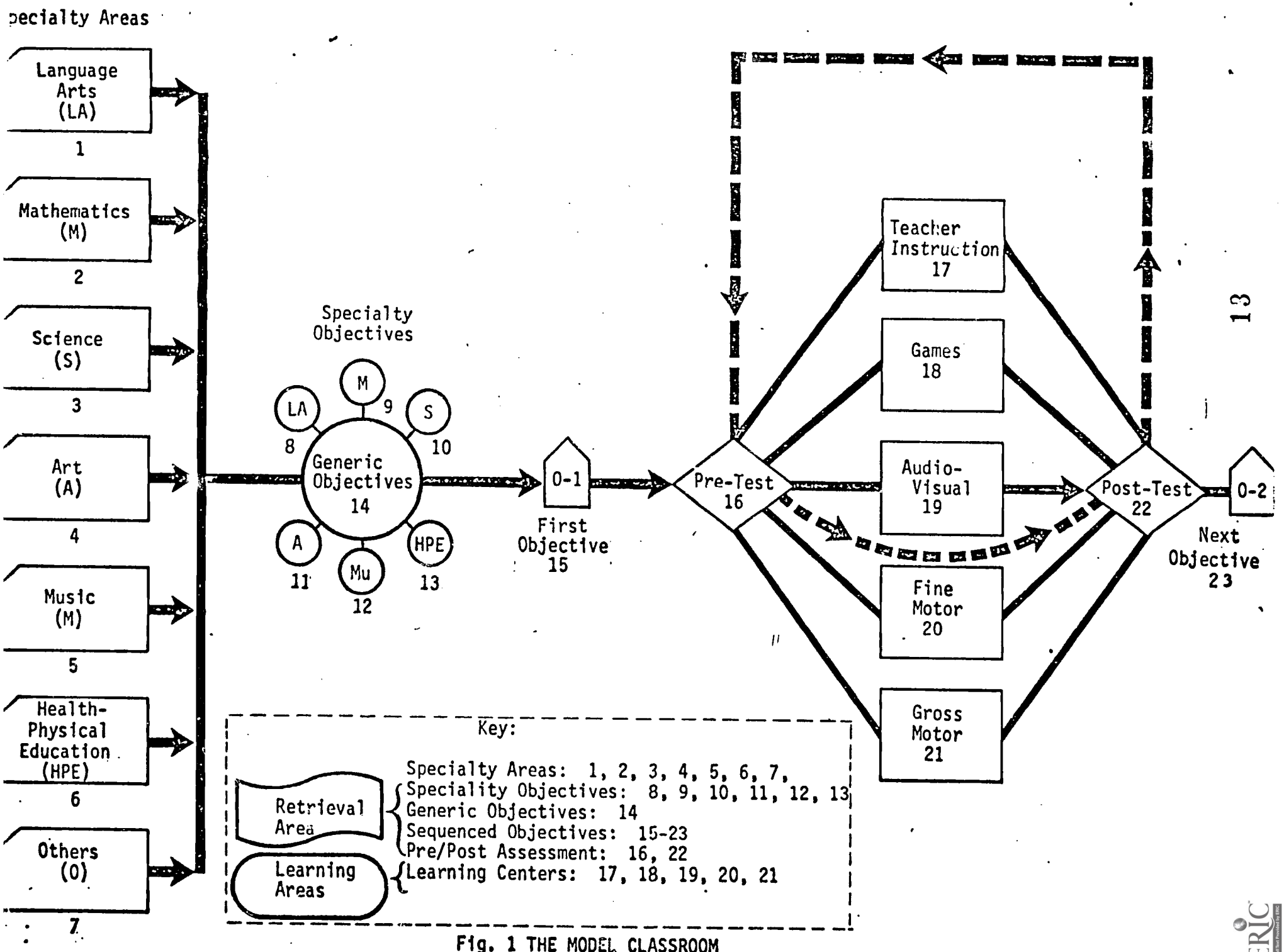


Fig. 1 THE MODEL CLASSROOM

## REFERENCES


1. Duckworth, E. Piaget Rediscovered: Journal of Research in Science Teaching, 1964, 2(3), 174.

2. Watson, J. D. The Double Helix. New York: Atheneum, 1968.

3. ERIC Clearinghouse on Teacher Education and the American Association of Colleges for Teacher Education. A Reader's Guide to the Comprehensive Models for Preparing Elementary Teachers. Washington, D.C.: One Dupont Circle, December 1969.

4. Houston, W. R. and R. B. Howsam. Competency-Based Teacher Education: Progress, Problems and Prospects. Chicago: Science Research Associates, 1972.

5. Ellis, H. C. The Transfer of Learning. New York: The Macmillan Co., 1965.

6. Hebb, D. O. The Organization of Behavior. New York: John Wiley & Sons, 1949.

7. Fuller, F. F. Personalized Education for Teachers: An Introduction for Teacher Educators. The Research and Development Center for Teacher Education, The University of Texas at Austin, 1970.

8. Flanagan, J. C. Individualizing Education. Education, February-March 1970, 90:191-206.